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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/591,081  | 08/30/2006  | Keiji Nishimoto      | 50478-3800          | 7834             |
| 53044 7590 11/05/2008<br>SNELL & WILMER L.L.P. (Panasonic)<br>600 ANTON BOULEVARD<br>SUITE 1400<br>COSTA MESA, CA 92626 |             |                      |                     |                  |
| EXAMINER  |             |                      |                     |                  |
| TRUONG, BAO Q   |             |                      |                     |                  |
| ART UNIT  |             | PAPER NUMBER         |                     |                  |
| 2875  |             |                      |                     |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/591,081

**Applicant(s)**

NISHIMOTO ET AL.

**Examiner**

BAO Q. TRUONG

**Art Unit**

2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 August 2008.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-14 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 30 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Hashimoto et al. [US 6,930,332 B2].

Regarding claim 1, Hashimoto et al. discloses an LED mounting module, comprising: a substrate [12]; and a plurality of reflecting members [30] made of a resin material and having a reflecting hole [see FIG. 2] in a position corresponding to one of LED devices [1] which are to be mounted on one of main surfaces of the substrate [bottom surface of 12], wherein the substrate [12] and the reflecting members are directly adhered to each other in such a state that the main surface of the substrate [top

surface of 12] is in contact with one of main surfaces of the reflecting members, and the reflecting members are each a separate unit (figure 2).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ignatius et al. [US 5,660,461] in view of Shimizu et al. [US 2003/0189829 A1].

Regarding claim 1, Ignatius et al. discloses an LED mounting module, comprising: a substrate [see FIG. 8]; and a plurality of reflecting members [68, 70, see FIG. 8] made of material and having a reflecting hole [see FIG. 5, 8] in a position corresponding to one of LED devices [see FIG. 4, 8] which are to be mounted on one of main surfaces of the substrate [see FIG. 4], wherein the substrate and the reflecting members are directly adhered to each other in such a state that the main surface of the substrate is in contact with one of main surfaces of the reflecting members, and the reflecting members are each a separate unit (figures 3-8). Ignatius et al. does not disclose the resin material.

Shimizu et al. discloses a reflecting member [3] made of a resin material (figures 4-5).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify material of the reflecting members of Ignatius et al. with resin material as taught by Shimizu et al. for purpose of providing an advantageous way of reducing weight.

The modification of the primary reference as discussed above would result in the claimed features below.

Regarding claim 2, Shimizu et al. discloses the substrate [1] includes an insulation board [1c, 1e] made of a resin material, and a wiring pattern [12a, 14a, 1d] on one of main surfaces of the insulation board [1c, 1e], and the resin material forming the insulation board contains a same resin as the resin material forming the reflecting member (figure 5).

Regarding claim 3, Shimizu et al. discloses the resin material is a thermosetting resin material principally containing an epoxy resin (paragraph 0186).

Regarding claim 4, Shimizu et al. discloses the resin material is a thermoplastic resin material principally containing a resin selected from a group consisting of a polyphthalamide resin, a liquid crystal polymer, a polyphenylene sulfide resin, and a polybutylene terephthalate resin [phenol, cyanate] (paragraph 0186).

Regarding claim 5, Shimizu et al. discloses the resin material contains one or more fillers to improve reflection efficiency (paragraph 0124).

Regarding claim 6, Shimizu et al. discloses the fillers include at least one of TiO.sub.2, SiO.sub.2, Al.sub.2O.sub.3, and BaSO.sub.4. (paragraph 0124).

Regarding claim 7, Shimizu et al. discloses the resin material forming the insulation board contains at least one of Al.sub.2O.sub.3, AlN, SiO.sub.2, and SiC (paragraph 0123, 0124).

Regarding claims 8 and 9, Shimizu et al. discloses a metal board [1b] is provided on the other main surface of the substrate, and the resin material forming the insulation board is a composite material containing an inorganic filler and a thermosetting resin material (figure 5, paragraph 0123, 0124, 0126).

Regarding claim 10, Shimizu et al. discloses a depression [4] is formed in a part of the substrate at which the reflecting member is adhered, and the depression is filled with the resin material forming the reflecting member (figure 5, paragraph 0147).

Regarding claim 11, Shimizu et al. discloses the LED device is one of a plurality of LED devices that are to be mounted on the main surface of the substrate, and the reflecting hole is one of a plurality of reflecting holes formed in the reflecting member in correspondence with the plurality of LED devices (figure 4).

Regarding claim 12, Shimizu et al. discloses the substrate includes an insulation board made of a ceramic material, and a wiring pattern on one of main surfaces of the insulation board (figure 5, paragraph 126).

Regarding claim 13, Shimizu et al. discloses the ceramic material contains at least one of Al.sub.2O.sub.3, AlN, SiO.sub.2, and SiC (paragraph 0123, 0124, 0126).

Regarding claim 14, Shimizu et al. discloses an LED module comprising: the LED mounting module defined in claim 1; and an LED device mounted on the LED mounting module (figures 3-5).

***Response to Amendment***

6. Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BAO Q. TRUONG whose telephone number is (571)272-2383. The examiner can normally be reached on Monday-Friday (8:00 AM - 4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra L. O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bao Q. Truong/  
Primary Examiner  
Art Unit 2875